

vehicle panel. It is simply improper to apply the flexible bulletproof fabric disclosed in Harpell as teaching the panel recited in independent claim 10. To make this distinction more clear, claim 10 has been revised to state that the recited panel is for a vessel wall, and that the panel when mounted in the vessel wall is "laterally loaded by fluid pressure". The Harpell fabric is not for a vessel and would not withstand lateral loading by a fluid.

The layers forming the panel in the claimed invention are "laminated" as independent claim 10 has been amended. By requiring the layers to be laminated, the claimed invention is further distinguished from the multi-layer fabric disclosed in Harpell. The various layers in Harpell are stitched together to maintain flexibility of the fabric. See e.g., Harpell, col. 10, ln. 57 and col. 12, lns. 11-48, and col. 13, lns. 36 et seq. The term "laminated" is defined in the dictionary as "composed of layers of firmly united material." Webster's Third New International Dictionary, p. 1267. The flexibility of the Harpell fabric precludes the layers of the fabric from being "firmly united" and, thus, Harpell does not disclose laminated layers as recited in claim 10.

As stated in the Action, Harpell does not teach the side aspect ratio of the panel recited in claim 10. Harpell also does not teach the narrow range of  $\pm 55-75^\circ$  angle between the fibers and the long side of the panel. Rather, Harpell teaches that the fibers of each fabric layer are preferably oriented at  $45^\circ$ . Harpell teaches away from the narrow range of angular offset, i.e., between  $55^\circ$  to  $75^\circ$  which is recited in the claims. If Harpell cannot angularly offsets the fabric layers by  $55-75^\circ$  with respect to a side of the fabric panel and at the same time has the fibers rotated by  $45^\circ$  with each layer. Accordingly, it

would not have been obvious to rotate the fabric fiber orientation by 55-75° between each fabric layer in Harpell.

The offset angle range of  $\pm 55-75^\circ$  recited in claim 10 has been demonstrated to provide unexpected and significant benefits, as shown by the test results shown in Figures 3 to 6. Figure 4, for example, shows that by orienting the fibers at an angle between 55-75° with respect to the long side of an elongated panel, superior deflection resistance and failure reduction occur. Harpell provides no suggestion that superior deflection and failure characteristics are obtained when fibers are oriented at 55-75° with respect to a long side of a panel.

Because Harpell does not teach or suggest a laminated panel for a vessel, a panel having a long side to short side ratio of at least 1.5, or a fiber angle with respect to the long side of 55-75° in each layer of the laminate panel, there is no obviousness.

This application is in good condition for allowance. If any small matter remains outstanding, the Examiner is requested to telephone applicants' attorney. Prompt reconsideration and allowance of this application is respectfully requested.

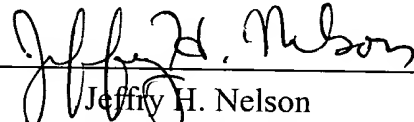
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Attached is a "Version Showing Changes Made to Claims".

Respectfully submitted,

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VERSION SHOWING CHANGES MADE TO CLAIMS

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Amend claim 10 as follows:

10. (Amended) A panel for a vessel wall having a longer side and a shorter side, and a side aspect ratio of at least 1.5, and comprising:

at least two reinforcing laminated layers of substantially unidirectional substantially parallel fibers having predominant orientations that form an angle with said sides of said panel;

said angle between said predominant fiber orientation and the longer side of said panel being between about 55-75°; and

approximately one-half of said reinforcing layers of said panel forming a + angle between about 55-75°, and approximately one-half of said reinforcing layers forming a - angle between about 55-75°, with respect to said longer side of said panel, wherein said panel, when mounted in said vessel wall, is laterally loaded by fluid pressure.

Cancel claims 24 through 29 without prejudice.